

US-PAT-NO: 5970477

DOCUMENT-IDENTIFIER: US 5970477 A

TITLE: Method and system for allocating costs in a distributed computing network

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Referring still to FIG. 2, the local access provider's point of presence 22 preferably includes a modem pool 32, a terminal server/router 34, and a local computing network 35. The local network 35 includes a web server 36, an authentication and accounting server 38 including a start/stop log 40, a credit server 42 including a credit log 44, and a billing system 46. The web server 36, which is maintained by the local access provider, provides a generally accessible Internet site similar to the Internet site 18. The start/stop log 40 documents each end-user's connect time with the modem pool 32. The credit log 44 documents each end-user's allocation parameters, preferably the connect time with a predefined list of free Internet sites. The start/stop log 40 and the credit log 44 are periodically downloaded to the billing system 46. The billing system 46 allocates the costs associated with each end-user's communications in accordance with the appropriate allocation methodologies, and renders the resulting invoices.

US-PAT-NO: 6335927

DOCUMENT-IDENTIFIER: US 6335927 B1

TITLE: System and method for providing requested quality of service in a hybrid network

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The problem with current switched networks is that when you have a LEC connected via legislated feature group D trunks, providing inexpensive access is difficult because access charges are dictated by the LEC. Therefore, if the Internet access is provided via a service which utilizes feature group D trunks, the cost passed on to the consumer is exorbitant. If the feature group D trunks are bypassed, and a dedicated network is provided, ie., the LEC is connected directly to a modem pool which provides access to the Internet, a second tier of problems arises. These problems include: scalability, survivability and inefficiency of design. Further, a modem would be necessary for each DSO purchased from the LEC. All of these problems are solved by the architecture discussed below.

FIG. 75 depicts operation of the switch 10530 to select a particular number or "hotline" for a caller. Switch 10530 accepts an incoming call from CBL 10527 or DAL 10547, and contacts DAP 10560 for instructions on routing the call. DAP 10560 returns routing information encoded in the form of a pseudo-telephone number. The pseudo telephone number has the same format as an ordinary telephone number but instead encodes a 3-digit switch identifier (SWID) and a file number of a file that identifies a desired Terminating Trunk Group (TTG). Switch 10530 contacts the switch 10610 identified by the SWID and passes to it the file number. Switch 10610 uses the TTG to select the appropriate modem pool 10620 to complete the connection. The modem pool in turn provides an Internet Protocol (IP) connection 10630 to such services as authentication service 10640 and to Basic Internet Protocol Platform (BIPP) 10650. The BIPP 10650 is composed of packet switches, such as ATM switches, that transfer IP packets from one node to another. Authentication service 10640 optionally performs security functions to authenticate the calling party and to prevent unauthorized access to the Internet. It may also be used to formulate billing information necessary to ensure proper reconciliation for customers that access the Internet via the TTG hotline. The provision of this hotline function

enables routing of the call through switches 10530 and 10610 without the use of expensive FGD links such as the FGD 10380 depicted in FIG. 72.

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TITLE: System, method and article of manufacture with integrated video conferencing billing in a communication system architecture

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FIG. 75 depicts operation of the switch 10530 to select a particular number or "hotline" for a caller. Switch 10530 accepts an incoming call from CBL 10527 or DAL 10547, and contacts DAP 10560 for instructions on routing the call. DAP 10560 returns routing information encoded in the form of a pseudo-telephone number. The pseudo telephone number has the same format as an ordinary telephone number but instead encodes a 3-digit switch identifier (SWID) and a file number of a file that identifies a desired Terminating Trunk Group (TTG). Switch 10530 contacts the switch 10610 identified by the SWID and passes to it the file number. Switch 10610 uses the TTG to select the appropriate modem pool 10620 to complete the connection. The modem pool in turn provides an Internet Protocol (IP) connection 10630 to such services as authentication service 10640 and to Basic Internet Protocol Platform (BIPP) 10650. The BIPP 10650 is composed of packet switches, such as ATM switches, that transfer IP packets from one node to another. Authentication service 10640 optionally performs security functions to authenticate the calling party and to prevent unauthorized access to the Internet. It may also be used to formulate billing information necessary to ensure proper reconciliation for customers that access the Internet via the TTG hotline. The provision of this hotline function enables routing of the call through switches 10530 and 10610 without the use of expensive FGD links such as the FGD 10380 depicted in FIG. 72.

L Number	Hits	Search Text	DB	Time stamp
1	407	modem adj pool	USPAT	2003/01/15 15:41
2	8389	Internet with access\$3	USPAT	2003/01/15 15:42
3	108	(modem adj pool) same (Internet with access\$3)	USPAT	2003/01/15 15:42
4	7	((modem adj pool) same (Internet with access\$3)) same (bill\$3 or charg\$3)	USPAT	2003/01/15 15:43